

WHO INFORMATION SERIES ON SCHOOL HEALTH

DOCUMENT THIRTEEN

Malaria

Prevention and
Control:

An important
responsibility of a
Health-Promoting
School



World Health
Organization

This document is part of the **WHO Information Series on School Health**. Each document in this series provides arguments that can be used to gain support for addressing important health issues in schools. The documents illustrate how selected health issues can serve as entry points in planning, implementing, and evaluating health interventions as part of the development of a Health-Promoting School.

Other documents in this series include:

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FOREWORD

This document is part of the WHO Information Series on School Health prepared for WHO's Global School Health Initiative and the Roll Back Malaria Partnership. Its purpose is to strengthen efforts to educate young people about malaria prevention and control.

WHO's Global School Health Initiative is a concerted effort by international organizations to help schools improve the health of students, staff, parents, and community members. Education and health agencies are encouraged to use this document to take important steps that can help their schools become "Health-Promoting Schools." Although definitions will vary, depending on need and circumstance, a Health-Promoting School can be characterised as a school constantly strengthening its capacity as a healthy setting for living, learning and working (see the Health-Promoting School box on the following page).

The Roll Back Malaria Partnership is a coordinated international approach to fighting malaria a disease that kills more than a million people each year, most of them children. Roll Back Malaria (RBM) was launched by the World Health Organization, UNICEF UNDP, and the World Bank in 1998 to halve the burden of malaria by 2010. The RBM Partnership has grown rapidly since its launch and is now made up of a wide range of partners, including malaria endemic countries, multilateral development partners, civil society organizations, and research and academic institutions that bring a formidable expertise, infrastructure and funds into the fight against malaria. All partners are encouraged to use this document when planning school-based efforts to prevent and control malaria.

Focusing Resources on Effective School Health (FRESH) is an international effort launched by WHO, UNICEF, UNESCO, the World Bank, Education Development Center, Education International and the Partnership for Child Development to encourage education and health agencies to work together to strengthen school health programmes to improve both health and education. Education and health agencies are encouraged to use this document to foster the implementation of school health programmes that help to prevent, control and reduce factors that contribute to malaria, and that also undermine learning, schooling and the goals of education.

The extent to which each nation's schools become Health-Promoting Schools will play a significant role in determining whether the next generation is educated and healthy. Education and health support and enhance each other. Neither is possible alone.

Benedetto Saraceno, Director a.i., Chronic Diseases and Health Promotion
Arata Kochi, Director, Global Malaria Programme
Awa Marie Coll-Seck, Executive Director, Roll Back Malaria Partnership

A Health-Promoting School

- Fosters health and learning with all measures at its disposal
- Engages health and education officials, teachers, students, parents, and community leaders in efforts to promote health
- Strives to provide a healthy environment, skills-based health education, and school health services along with school/community projects and outreach, health promotion for staff, nutrition and food safety programmes, opportunities for physical education and recreation and counselling, social support, and mental health promotion
- Implements policies, practices, and other measures that respect an individual's self-esteem, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as personal achievements
- Strives to improve the health of school personnel, families, and community members as well as students, and works with community leaders to help them understand how the community contributes to health and education

In addition to these general characteristics of Health-Promoting Schools, WHO Regional Offices have engaged their member states in developing regional guidelines and criteria for Health-Promoting Schools and other school health efforts. Please contact your WHO Regional Office to obtain these guidelines. For communication with Regional Offices, you may consult the WHO Internet site (www.who.int) or contact them by phone or fax at:

Regional Office for Africa (WHO/AFRO), Harare, Zimbabwe:

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Malaria Prevention and Control: An Important Responsibility of a Health-Promoting School

1. INTRODUCTION

This document, part of the WHO Information Series on School Health, is intended to help people use health promotion strategies to prevent and control malaria. Based on the re-commendations of the Ottawa Charter for Health Promotion (Annex 1), it will help people to apply a new approach to public health, one that creates ongoing conditions conducive to health and well-being, as well as reductions in prevailing public health concerns.

The concepts and strategies introduced in this document apply to malaria endemic countries and those otherwise traditionally burdened with malaria. It should be noted that some of the examples might be more relevant to certain countries than others. It is recognized that environmental conditions, such as technical and societal issues in the school, community and family might not be ideal and affect the extent to which interventions to prevent or reduce the burden of malaria can be implemented. However, a Health-Promoting School contributes to improve those conditions by fostering malaria control and prevention interventions even in a less healthful environment.

1.1 Why did WHO prepare this document?

The World Health Organization (WHO) has prepared this document in collaboration with the Roll Back Malaria Partnership Secretariat to help individuals and groups take control over, and improve the health of citizens in their country. Malaria and its health complications are responsible for high rates of absenteeism in the school system each year (1, 2). Malaria infections also have a tremendous social and economic impact in the community (3, 4, 5) and they impact on child survival and long term development. This document provides information that will assist individuals and groups to make a strong case for increased support and attention to malaria education and prevention initiatives. This document also provides information to help people understand the nature of a Health-Promoting School and how efforts to promote health and reduce malaria infections through prevention and control measures might be planned, implemented and evaluated as part of the development of a Health-Promoting School.

1.2 Who should read this document?

This document is directed towards:

- Governmental policy-makers, decision-makers, programme planners and coordinators at local, district, provincial and national levels, especially those from the ministries of health and education.
- Members of nongovernmental institutions and other organizations and agencies responsible for planning and implementing health and malaria control interventions, especially programme staff and consultants of national and international health, education and development programmes interested in promoting health through schools.
- Community leaders, local residents, health care providers, social workers, development assistants, media representatives and members of organised groups (e.g. youth groups and women's groups) interested in improving health, education and well-being in the school and the community.
- School community members, including teachers and their representative organizations, students, staff, parents, volunteers and school-based service workers.
- Students in pre-service teacher training programmes and teachers participating in in-service training programmes.

1.3 What is malaria?

Malaria is transmitted to humans through the bite of an infected female *Anopheles* spp. mosquito (3,6). Malaria is a parasitic disease caused by one of four species of *Plasmodium* to which humans are susceptible (*Plasmodium falciparum*, *P. vivax*, *P. malariae* or *P. ovale*) (3,6,7). Malaria infections can range in their level of severity. In human malaria *P. falciparum* is the most virulent and the most likely to result in death (7).

Did you know that...?

- Malaria contributes to 9% of the global disease burden (8).
- It is estimated that approximately 60% of deaths caused by malaria occur in the “poorest 20% of the world's population (4)”.
- It results in absenteeism, affects learning and results in loss of income

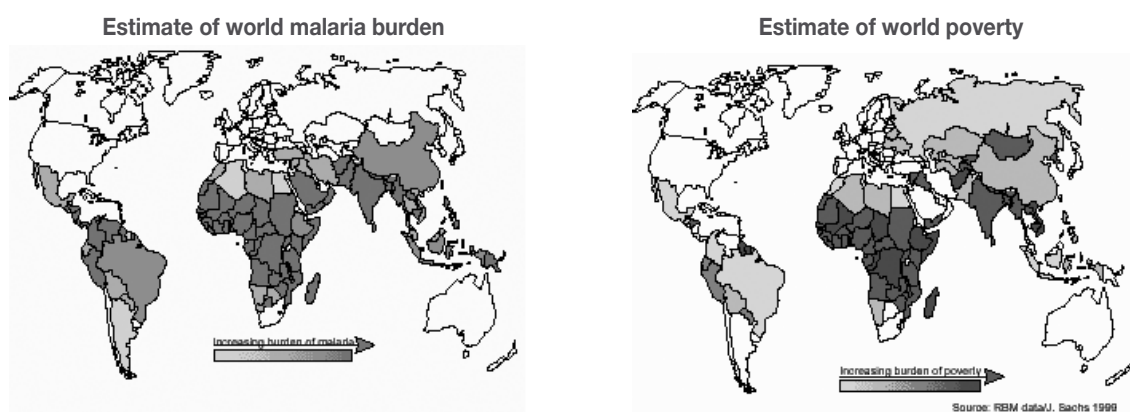


Figure 1: Estimate of world malaria burden compared to the estimated distribution of world poverty (9).

1.4 Malaria can be treated and prevented.

Malaria is largely preventable and easily treatable. However, although malaria is a preventable disease, a child dies of malaria every 30 seconds (9,10).

- Each year more than 300 million people are infected with malaria worldwide (3,7,9,11).
- Of those infected, at least 1 million people die. Most of these deaths occur in African children under 5 years of age due to an infection of *Plasmodium falciparum* (9,11,12).

Malaria can be prevented by simple interventions and schools can serve as a gateway to teaching prevention measures that can be carried with the student for life and shared with the community. Those living in malaria endemic areas should be encouraged to:

- Always sleep under insecticide treated nets (ITNs)
- Control environmental factors conducive to mosquito breeding.
- Encourage women to receive intermittent preventive treatment during pregnancy.
- Recognize symptoms of malaria and seek early treatment, especially if in a risk group.
- Request effective antimalarial drugs (mainly, Artemisinin-Combination Therapies) and finish the complete treatment cycle.
- Learn at an early age, the seriousness of malaria and the danger that the disease poses to health and individual well-being.
- Use mosquito repellents, if available, and other locally recommended and available methods of personal protection.

1.5 What are malaria interventions?

Malaria interventions are policies, services, learning experiences and other actions implemented by schools, individuals or groups to make malaria control and awareness a way of life. Malaria interventions are designed to promote health and decrease the risk of infection. In a Health-Promoting School, malaria interventions are integrated into all aspects of school and community life through a wide variety of education opportunities, school/community projects, school health services, school health policies and health promotion and disease prevention training for school staff.

1.6 Why focus efforts through schools?

Schools provide the most effective and efficient way to reach large portions of the population, including young people, school personnel, families and community members. Students can be reached at influential stages in their lives, during childhood and adolescence (13), when lifelong behavioural patterns are formed. Schools have been given the mandate and responsibility to enhance all aspects of development and maturation of children and youth under qualified guidance.

1.7 How will this document help people prevent and control malaria, especially among youth?

This document is based on the latest information and research, but it is more than a technical document. It is designed to help people address the broad range of factors that must be changed to prevent and reduce risk behaviours and conditions that lead to or cause malaria infections.

This document will help individuals and groups to:

- a) **Create Healthy Public Policy.** This document provides information that people can use to argue for increased local, district and national support for malaria prevention interventions in schools and to justify decisions to increase such support.
- b) **Develop Supportive Environments.** This document describes environmental changes including vector control, house spraying and use of insecticide treated nets (ITNs), which are necessary to prevent and reduce malaria infections among students, their families and communities. It also describes how parents, teachers, community leaders and others concerned about malaria can support these changes in schools and communities.
- c) **Reorient Health Services.** This document describes how current health services can be modified and expanded to prevent and control malaria while creating more effective school health promotion programmes.
- d) **Develop Personal Skills.** This document identifies skills that young people need to develop and maintain behaviours that reduce their risk of infection.
- e) **Mobilize Community Action.** This document identifies actions that the school and community can undertake to prevent and control malaria. It identifies ways in which the school can collaborate with the community to implement and strengthen school programmes. It also provides arguments and facts that can be communicated through the mass media to call attention to methods of preventing malaria infections and where and how to seek appropriate treatment in the event of infection.

1.8 How should this document be used?

Sections 2 and 3 can be used to argue for increased malaria control and prevention programmes. Section 4 can be used to create a strong basis for local action and for planning interventions relevant to the needs and circumstances of the school and community. Section 5 suggests ways to integrate health promotion efforts into various elements of a Health-Promoting School. Section 6 assists in evaluating efforts to make health promotion and malaria control and prevention an essential part of a Health-Promoting School.

For specific guidance on planning, implementing and evaluating school health efforts, this document should be used in conjunction with the WHO document “Local Action: Creating Health-Promoting Schools,” which provides practical guidance, tools and tips from Health-Promoting Schools around the world and can help tailor efforts to the needs of specific communities.

2. CONVINCING OTHERS THAT MALARIA PREVENTION IN SCHOOLS IS IMPORTANT

This section provides arguments that can be used to convince policy- and decision-makers and others of the importance of malaria prevention and control during childhood and adolescence. These arguments present reasons why communities and schools both need and will benefit from malaria interventions and control programmes. **They also provide reasons to justify decisions to increase support for such efforts.**

2.1 Argument: Young people are vulnerable to malaria.

Children are particularly vulnerable to malaria. In developing countries, malaria is one of the most common causes of death in children under the age of 5 (8,9). Malaria accounts for 10 – 20 % of deaths among school aged children (1). If a child infected with malaria recovers from the illness, he/she risks suffering from reinfection. Children who have been infected with malaria and survive may also develop impairments to their cognitive development and repeated absenteeism from school will also impact on their learning. Both situations will affect their future school performance as well as their ability to become productive adults in their communities (9,11,14,15,16).

2.2 Argument: Malaria causes severe illness and much suffering.

Malaria infections range in their level of severity dependent upon the type of malaria contracted. During an infection with malaria, in addition to a high-grade fever, a child can suffer from other symptoms of the disease such as convulsions, headaches, pains in the extremities, anorexia, prostration, nausea, and other gastrointestinal afflictions such as diarrhoea and vomiting (17). In some cases of childhood severe malaria infections, there can be other clinical manifestations inclusive of metabolic acidosis, hypoglycemia, seizures, coma and cerebral damage (18). If treatment is not sought to alleviate some of the symptoms of infection and kill the *Plasmodium* spp parasite, the victim will risk irreversible damage to their health and even death.

There are three ways that malaria kills children (19):

- Malaria infection during pregnancy
- Acute febrile illness
- Chronic repeated infections

Although malaria is preventable and curable, parents living in poverty are often unable to purchase anti-malarial medications (5,9). Furthermore, many are unable to recognise the signs and symptoms in the first place. It is imperative that parents and guardians, especially those who may be in risk-groups, recognise signs and symptoms of malaria, are aware of the importance of seeking prompt medical treatment, and can avail themselves of any and all resources available to them. Health and education agencies should work together to make affordable treatment as close to the community as possible. Schools can provide assistance to parents in finding appropriate care and treatment for school children infected with malaria. They could, for example, have Rapid Diagnostic Tests (RDTs) - portable testing kits for confirming malaria infection. Schools, in conjunction with sponsorship from local government and community health worker volunteers can provide malaria diagnosis and medications for those children unable to seek medical care.

2.3 Malaria results in significant social implications.

Children are the future of societies. Malaria can have a devastating effect on populations of developing countries and whole communities are impacted in many ways. For example:

- Malaria impacts one's ability to work. If a breadwinner becomes ill, the family will suffer, especially children who depend on the breadwinner for sustenance.
- Teachers who become infected with malaria are also unable to work. It is estimated that in Sub-Saharan countries, teachers miss an average of 14 days per school year due to malaria infections (20).
- Malaria prevents children from attending school due to illness it can jeopardise a child's learning ability if neurological damage and anaemia is sustained from repeated malaria infections. 1,15).
- Children who experience more than five attacks of malaria score lower on language and mathematics tests than children who experience less than three attacks of malaria (44).
- If children are not able to gain the knowledge and skills needed to succeed in life, the future workforce of a community is threatened as well as the economic growth of the community (4, 5, 9).
- And, it kills children!

2.4 Argument: Schools provide a good entry point for malaria prevention and control.

Malaria and the consequences of a malaria infection should be addressed by schools in an effort to teach children that malaria is a dangerous disease. By including malaria awareness and control in the school health education curriculum, schools can educate children on the dangers of malaria as well as how to prevent the disease by teaching children ways that they can actively participate in prevention measures with friends, family and individually.

School health teachers and/or school health nurses should also make children aware that good health is imperative to their future and that they should try to promote health by taking measures to reduce the chance of infection caused by preventable diseases such as malaria. This can be accomplished through in class educational activities as well as take home assignments that are designed to make children aware of their home environment and encourage parental or guardian participation.

School teachers are professional in disseminating information in and out of the school community. Schools can serve as a gateway to the community by providing entry points for malaria prevention and control by serving as a liaison to children, parents and the community at large. Schools can work with local governments and health facilities to become a distribution point for insecticide treated mosquito nets (ITNs) and net re-treatment. Schools can also distribute malaria information packs to children to take home to their parents and other family members. School children and teachers can also be involved in community campaigns during ITN distribution, retreatment of nets and activities for behavioural changes (such as dramas, concerts, mobilization of communities and volunteers).

2.5 Argument: The physical environment of the school can either support or undermine malaria prevention and control

Children learn best through example and by doing. If school health educators try to instil in children the importance of controlling malaria breeding sites at home, then the school should try to ensure that school grounds are not conducive to mosquito breeding sites by keeping standing water and receptacles to a minimum. The school administration can make sure that building screens are treated and school grounds along with all classrooms are routinely sprayed (20). This is particularly important in boarding schools. Maintaining a healthy physical environment to prevent malaria infections will also reduce the prevalence of other parasitic organisms.

Since prevention in the home is also an important way to reduce the transmission of malaria, simple actions to control environments conducive to mosquito breeding such as controlling standing water in receptacles, old tires, puddles and latrines should be taught in the classroom and practiced at home. Such actions can contribute to a reduction in mosquitoes though they may not suffice. Teachers can play an important role in malaria control and awareness by sharing with children examples of effective interventions and how they take measures to control malaria in their homes and raise malaria awareness within their own families. Teachers can also set a good example to promote malaria awareness by taking action on school grounds.

While practicing vector control on school grounds and promoting a healthy school environment, children can be taught about vector control methods that can be used in the home such as using insecticide treated nets (ITNs) and the benefit of indoor-residual house spraying (IRS) (21,22,23). ***The goal of vector control in the environment is to kill malaria transmitting mosquitoes, significantly reducing their population and therefore preventing disease.*** Indoor-residual spraying (IRS) is feasible in areas where mosquito population is limited and where malaria transmission is seasonal. IRS helps to prevent malaria outbreaks (epidemics) and to contain outbreaks if applied early enough (22). Parents should be encouraged to allow spray people into their houses when they are carrying out spraying campaigns. The use of ITNs is an affordable and effective method of preventing malaria in endemic countries, particularly where malaria transmission is throughout the year. In these areas children under 5 years of age and pregnant women should be given priority for ITNs. When used properly and routinely treated, ITNs provide protection from mosquitoes by repelling or killing them when they try to bite. And, they can reduce 20% of under 5 mortality.

3. CONVINCING OTHERS THAT MALARIA PREVENTION AND CONTROL IN SCHOOLS WILL REALLY WORK

This section provides information that can be used to convince others that malaria prevention interventions will really work, especially when implemented in schools, and help policy-makers and decision-makers justify their decisions to support such efforts

3.1 Schools have the ability to reach large portions of the population.

Schools are a central part of the community and can serve as a central medium in raising malaria awareness and prevention in both the children that they serve and the community at large. Their capacity to reach many people enables schools to serve as affordable and cost-effective options for raising malaria awareness through teaching skills-based health education programmes and by incorporating malaria awareness into existing school health programmes.

Children can be important agents for change. Thus, health education in schools can help promote a community wide understanding of malaria and the need for control and can create a demand for health services (both private and public) to provide access to affordable and appropriate treatment.

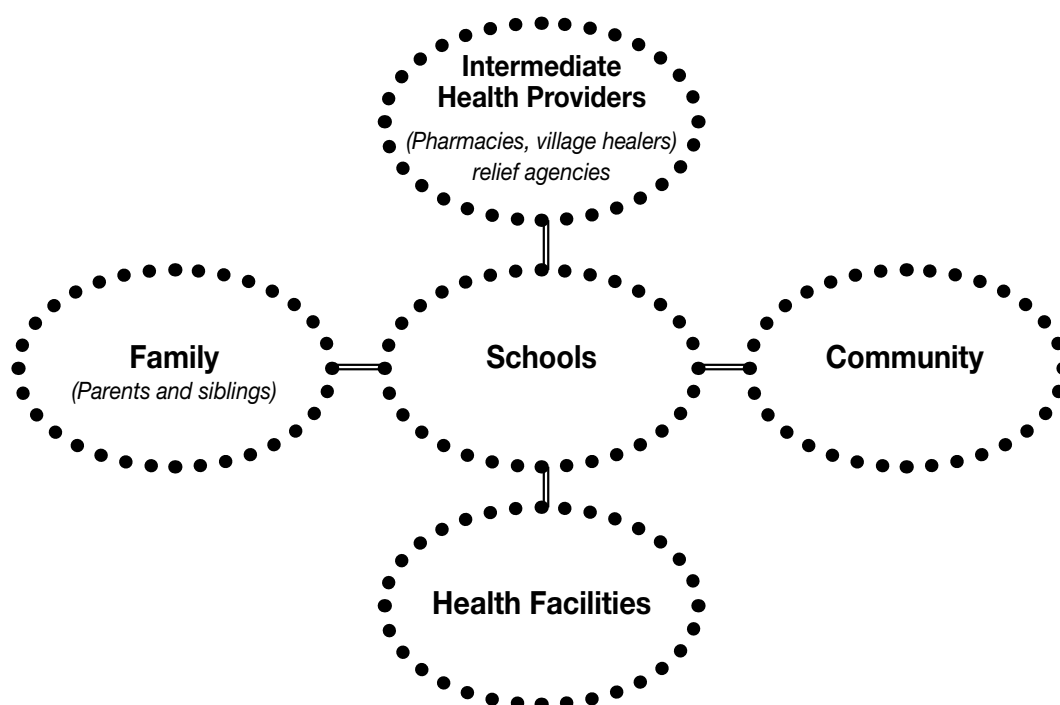


Figure 2: Malaria prevention taught in schools reaches a large portion of the population (20).

3.2 Argument: Schools can provide the opportunity for both children and parents to become involved in malaria control.

When schools set up school-wide activities, based upon multiple strategies and involving parents and community members, the whole school population can benefit from malaria prevention. Combining school interventions with community action and support enhances the effects of the interventions

Schools can involve both parents and children in activities such as:

- Offering affordable insecticide treated nets for sale or at no cost dependent upon the national policy.
- Offering days for communities to have existing ITNs re-treated.
- Offering seminars on vector control.
- Offering seminars sponsored by health clinics to make families aware of malaria's symptoms and the importance of seeking prompt treatment (24, 25).

3.3 Argument: Schools can incorporate malaria awareness and control into class activities.

Schools are recognized places of learning with existing structures and systems that provide opportunities for integrating new knowledge and skills in a way that is both acceptable and cost-effective. Learning experiences in school can significantly influence students' attitudes and behaviours. Schools can teach malaria awareness and information needed to adopt health behaviours to children in different age groups.

Schools can also involve children in malaria awareness activities that will help children correlate what they learn and do in class to what they do once they leave the classroom (26). This can be accomplished through participatory learning methods such as (26, 27,28):

- Role playing
- Story telling
- Drawings
- Flashcards
- Games
- Comic and interactive activities
- Group discussion
- Competitions

Involving children through active participation will give them a sense of empowerment and the enthusiasm to become involved in control efforts to protect their own health as well as the health of younger siblings and peers. From knowledge and skills gained in the classroom, children can disseminate malaria awareness to their communities, they can share what they have learned with children who may not be able to attend school, or with other school children who do not have malaria control and prevention programmes in their school (26).

3.4 Argument: During school years, girls will particularly benefit from health education focused on malaria control and prevention.

In many societies, women provide the majority of care for their families. As young girls will be future care-givers, it is important to teach them the sign and symptoms of malaria and the dangers that malaria poses to their health as well as the health of their families. Young girls should also be taught the vulnerability of pregnant women to malaria and the danger posed to their unborn child. Schools can help pregnant teens by advising them to seek antenatal care (ANC) where they can be provided preventive doses with at least two intermittent treatments (IPT) during their pregnancy, which will reduce the risk of malaria infection to the mother as well as the unborn child (9, 29,30). Pregnant women with HIV should receive at least 3 doses of intermittent presumptive therapy (IPT) - a preventive treatment which reduces the risk of malaria infection during pregnancy. Doses of IPT are most commonly administered at antenatal clinics during the 2nd and 3rd trimester (6 to 9 months). The importance of consistently sleeping under an insecticide treated net (ITN), should be re-enforced especially while pregnant.

Providing health education to girls and women has a significant impact to the health of the developing world (31). Instilling a solid foundation in health education and disease prevention is an important tool for aiding in the effort to prevent the loss of life inflicted by many preventable diseases. Teaching skills based health education to students at an early age is important because the school years mark the beginning of behaviours that will be practiced for the rest of life and health behaviours can also be passed on to future generations of children.

3.5 Argument: Schools that provide malaria education have made a positive impact.

Several countries have already recognized the importance of teaching children that malaria is a preventable disease. Some have incorporated content addressing malaria control and prevention into school health education programmes. Or, they have incorporated malaria education into programmes addressing parasitic infections, environmental health and sanitation.

School systems have implemented malaria education programmes in conjunction with their government and other Roll Back Malaria Partners such as WHO, USAID, UNICEF and non governmental organizations. The countries addressing malaria education in their school health programmes can be reviewed by going to www.schoolsandhealth.org and reviewing the link titled Country Programmes. Review of this site provides examples of current programmes, the age groups the programme is targeted towards, level of community involvement and results of the programme.

The following are examples of programmes in which either instituting or incorporating malaria education in schools has had a positive impact:

- The National School Health Programme of Myanmar (established in 1991) is a government run and sponsored school health education programme, which teaches children healthy behaviours focusing on health promotion and disease prevention. Since they have introduced malaria health education, **they have stabilized malaria morbidity and mortality rates among school age children over the past 4 years.**
- Zambia has developed The Society for Family Health Child-to-Child Campaign's Eastern Province Integrated Malaria Initiative. This programme educates teachers and children on malaria transmission, prevention and the importance of treatment seeking behaviours. The programme spreads its message to the community in forms of plays and other forms of communication designed and disseminated by school children. The programme has provided students and families with Insecticide Treated Nets (ITNs) free of charge or at minimal cost.
- Kenya and Gambia have school health education programmes and youth groups that focus on malaria education. Children in these programmes are involved in creating plays that teach the importance of malaria awareness and prevention. Children are also involved in activities that teach them the importance of vector control.

4. PLANNING INTERVENTIONS

Malaria prevention can be an entry point for schools that want to build their capacity to plan and implement a wide range of health promotion efforts. The first step is to recognize malaria prevention as a priority for both education and health. The next steps are to: determine which interventions will have the most significant influence on conditions and behaviours related to malaria control and how to integrate such interventions with other health promotion efforts for maximum results. When planning interventions it is crucial to first get in contact with local health authorities and others such as representatives of the National Malaria Control Programme (NMCP).

This section describes key steps to consider in planning malaria prevention activities:

- Establishing a School Health Team and a Community Advisory Committee
- Conducting a situation analysis
- Obtaining political, community and parental commitments
- Setting goals and objectives
- Setting communication and interventions strategies

4.1. School and community involvement in planning

Health-Promoting Schools involve members of the school and community in planning programmes that respond to their needs and can be maintained with available resources and commitments. Two important groups to involve in the planning process are a School Health Team and a Community Advisory Committee, who should request support from local health authorities and as necessary, the NMCP.

4.1.1 School Health Team

A School Health Team is a group of people working together to maintain and promote the health of all people who are working and learning at school. Potential members of the School Health Team include: teachers, administrators, students, parents and school-based or relevant health service providers. Ideally, this team coordinates and monitors health promotion policies and activities, including those related to malaria. Since schools should implement programmes that respond to important and relevant local needs, it is essential to involve students, parents, teachers and school management in the planning process from the beginning.

Active participation builds a sense of ownership that enhances programme sustainability and support:

- Young people, involved in an early stage of planning, can help develop a programme that responds to their specific needs and concerns
- Parents and teachers can help ensure that programmes are developed in a culturally appropriate manner.
- Teachers and other school staff can help ensure that interventions are developed with consideration of what they know and what they can do to establish malaria prevention as an essential element of a Health-Promoting School.
- If a school does not have a School Health Team or group organised to address health promotion, the malaria prevention and control effort can provide the opportunity to form one. The School Health Team can include a balance of students and adults who have various responsibilities in the school. School Health Team members should be committed to the idea of health and malaria prevention. The School Health Team, or selected members, can be responsible for planning, designing and evaluating efforts to prevent and reduce malaria in the school environment.

4.1.2 Community Advisory Committee

A Community Advisory Committee can represent a wide spectrum of local groups and organizations that are somehow linked to the school and can provide information, arrange resources, give advice and provide support for malaria prevention. It is important for schools to work with outside groups and individuals who have an impact on students' knowledge, attitudes and behaviours. If the school or district already has a Community Advisory Committee, find out whether it addresses health promotion and malaria prevention.

The Community Advisory Committee should include men and women with a diversity of skills who:

- are influential in the community or district
- are interested in health promotion and malaria prevention
- are able to mobilize support and connections
- represent the community's geographical areas as well as economic, social, ethnic and religious make-up

It may be beneficial to collaborate with existing community groups, such as a city council or school board in considering malaria prevention activities or similar structures. Potential partners can include: representatives of local government and non-governmental organizations, businesses and vendors, media, religious leaders, community residents, community youth agencies, social service providers, health service providers and sports figures.

To facilitate the efforts of the School Health Team, the Community Advisory Committee can help to:

- determine local needs and resources
- disseminate information about malaria control and prevention
- build community support
- encourage community involvement
- help obtain resources and funding for health and malaria prevention interventions
- reinforce learning experiences provided in school

The Community Advisory Committee and the School Health Team should work together to plan health promotion efforts and coordinate the various components of a Health-Promoting School, such as health education, health services, community and family involvement so that all aspects of health promotion work together for health and malaria prevention.

4.2 Situation analysis

Policy-makers, decision-makers and interested groups at national, district and local levels should consider a situation analysis to guide the development of Health-Promoting Schools and malaria prevention programmes. At the local level, a School Health Team and Community Advisory Committee, once established, can start planning a programme by conducting a situation analysis.

4.2.1 Purpose of conducting a situation analysis

A situation analysis will help people better understand the needs, resources and conditions that are relevant to planning interventions. A good situation analysis has several benefits:

- Policy-makers and decision-makers need strong, locally relevant arguments, especially when their actions involve allocating resources.

- Accurate and up-to-date information can provide a basis for discussion, justification, setting priorities and identifying groups in special need of interventions, such as children living in geographical areas where malaria is more prevalent.
- Local customs, traditional practises cultural believes on malaria and other diseases (both positive and negative) need to be assessed and analysed to design strategies for building on positive attitudes and practices and for avoiding counterproductive believes and practices.
- Data obtained through the situation analysis can help ensure that programmes focus on the actual health needs, experience, motivation and strengths of students, staff, families and community members. Data also provides a baseline against which to observe future trends in malaria infections.

4.2.2 Information needed

It is useful to know the prevalence of malaria in the community as a starting point to promote malaria prevention. Data on attitudes and levels of knowledge about malaria are also important for planning effective interventions. The table below shows some basic questions that schools might explore in a situation analysis. Participatory processes and tools for gathering information are an effective way to engage school personnel, students and the community in an effort to learn more about malaria in the nation and community.

Basic Questions	Methods for Data Collection
What is the prevalence of malaria in the community?	Review existing health data; sample survey, National reports, community maps of high risk malaria areas and even of ITN coverage
What is the prevalence of malaria among school-age children and adolescents? Among parents and teachers?	Review existing data; sample survey, National reports
Do parents and children have basic knowledge about malaria?	Questionnaire; focus group discussions, Knowledge Attitude and Practice (KAP) surveys
What are the common attitudes and beliefs of teachers, parents and young people towards malaria and its prevention? Do teachers think they have the skills they need to help students become aware of malaria and encourage prevention?	Questionnaire; focus group discussions
Does a school policy on malaria exist?	Interview with school officials; review of school policies
What conditions exist that encourage or discourage malaria prevention and control activities in school? In the home? In the community?	Questionnaire; focus group discussions
Are other health interventions being implemented in schools - can interventions to address malaria be integrated into them or lessons be taken?	Interview with school and community leaders

4.2.3 Data resources

In obtaining information, schools may not necessarily need to conduct surveys by themselves. It is very useful to collaborate with health, education and other community organizations, mass media, teachers, parents, students and others to gain access to available data sources and avoid duplication of assessments. Data about the prevalence of malaria may be available from the local health unit, or from other local or regional organizations. Youth risk behaviour surveys or other health-related assessments can provide valuable information. Data from existing reports and surveys should be carefully reviewed before deciding to undertake a new survey of current needs. For instance, a review of annual attendance records may provide information specific to the school regarding the number of children out of school due to malaria or malaria related illnesses.

Where data are not available, one may use simple and proven assessment tools, such as surveys and questionnaires to identify relevant conditions and behaviours.

4.3 Policies and community commitment

4.3.1 Political Commitment

National policies, guidelines and support from ministries of health, education and environment can be of immense help to local schools. Efforts to promote malaria control and prevention through schools are most successful with the will, commitment, attention, support and action of these authorities. Collaborative relationships with other sectors and with local governments may also prove valuable.

Political commitment is evidenced by (32):

- Public policies in support of such actions as ITN and acknowledgement by government officials of the importance of malaria control and prevention.
- Clear support from the ministries of education, health and the environment for health promotion and malaria prevention.
- Designation of someone with responsibility and authority at national, district and local levels to deal with health and malaria control issues and plan interventions through school.
- Financial support for health promotion and malaria prevention interventions.
- Training, equipment, educational tools and materials to enable schools to develop educational plans and implement health and malaria prevention interventions (33).

4.3.2 Community commitment

Creating a successful Health-Promoting School relies in part on the extent to which people in the community are aware of and willing to support health promotion efforts. Schools need to receive input from parents and community members regarding the design, delivery, content and assessment of school health promotion, so as to respond to their concerns and to attain their commitment. Family and community members should be involved very early; for instance, through community group meetings, social or cultural gatherings, parent-teacher associations, formal presentations, open houses, civic clubs and religious centres. Commitment and support of many parties on various levels is needed to share expertise, facilities and resources. Partnerships of representative individuals, groups and organizations from numerous sectors, such as nongovernmental, education, health, business, agriculture, communication, recreation, voluntary service and religion can demonstrate and provide commitment, resources and support for health promotion and malaria prevention interventions.

Community commitment is evidenced by:

- Public acknowledgement of the importance of malaria awareness and prevention by community leaders and local health, education, agricultural and other relevant organizations and businesses.
- Establishment of a designated committee for coordinating community malaria prevention interventions.
- Provision of local resources for health and malaria interventions in schools.
- Coordination of interventions with other programmes in the community.
- Efforts that attract community and media attention.

4.3.3 Parental support and commitment

The awareness and commitment of parents are central to the success of efforts to prevent and reduce malaria infections through schools. Parents influence their children's health directly by providing a health promoting environment in which to live and raise their children. Parents convey norms and serve as role models. Ensuring that parents recognize and understand the dangers of malaria and the importance of preventing it can help bring about support and action. They can also reinforce on-going school efforts to influence behaviours and the conditions that reduce chances of infection and prevent malaria. Schools can mobilize parental support through special meetings at school, focused on issues such as malaria awareness and promoting a healthy physical environment at home.

Parents can show their commitment by:

- Recognizing their direct and indirect influence on the health and behaviour of their children.
- Recognizing the vulnerability of children to malaria and taking children showing clinical symptoms of malaria to health facilities promptly.
- Paying for medical expenses of sick children, if they have money.
- Practicing vector control at home (indoor spraying, using insecticide treated nets, clearing of mosquito breeding sites).
- Setting an example of the importance of prompt seeking treatment and finishing all medications when infected with malaria (22, 24, 25).
- Participating in planning, implementing and evaluating malaria prevention programmes at school.

4.3.4 Goals and objectives of malaria control and prevention interventions in schools

Setting goals and objectives is crucial to clarify what malaria prevention and control interventions are intended to achieve and how the interventions ought to be evaluated in order to measure and monitor their sustainability. It is beneficial if goals and objectives are implemented by the School Health Team in cooperation with the Community Advisory Committee based on the outcome of the situation analysis.

1. Goals

Goals should describe in broad terms what the programme will achieve. In a Health-Promoting School, the overall goal of malaria prevention and control interventions is to prevent malaria infections and reduce the suffering and school absenteeism caused by malaria.

Furthermore, it has to aim at:

- Adapting the school curricula to bring about long-term behavioural change in pupils regarding malaria prevention and control
- taking advantage of health promoting school as a vehicle for anti-malaria efforts to reach the whole community

Based on the set goals, specific objectives have to be defined outlining actions that have to be taken to achieve these goals. Objectives should always be specific, measurable and time-bound.

2. Outcome Objectives

Outcome objectives may focus on health status, behaviour and/or conditions, as well as measurable changes in knowledge, attitudes, skills and services. The following list provides examples of outcome objectives that could be developed for malaria prevention and control interventions in schools:

Health and behavioural objectives

- By ---- year, malaria-related absenteeism of pupils and staff will be reduced from...days to...days.
- By ... year, the number of new malaria infections among pupils and staff will be decreased by ... %.
- By ... year, the malaria related mortality among pupils and staff will be decreased by ... %.
- By ... year, the number of pupils sleeping under ITNs will increase from ... % to ...%.

Educational objectives

- By ... year, at least ...% of the pupils will be able to state at least 3 prevention measures.
- By ... year, at least ...% of the pupils will be able to name at least 3 ways to control/ reduce mosquito breeding places.
- By ... year, at least ...% of the pupils will be able to identify at least 3 symptoms of malaria.
- By ... year, at least ...% of the pupils will be able to describe 3 actions that should be taken if a child has a fever.

3. Process Objectives

Process objectives describe how malaria prevention and control interventions are being implemented. Below you will find a list giving example of process objectives changes in knowledge, attitudes, skills and services. The following list provides examples of outcome objectives that could be developed for malaria prevention and control interventions in schools:

- By ...month, three activities will be added to the school curriculum that involve children working with their families to, avoid night mosquito-bites assess and maintain safe and mosquito-free environments.
- By ... month, the school will provide ITNs or insecticides for ITN re-impregnation.
- By ... month, the school will meet with local health authorities to look at ways that poor students will get affordable/ free ITNs/ insecticides/ treatment/ medication.
- By ...month, students and staff will provide training sessions for families and other community members about how to prevent, control and treat malaria.
- By ... month, the school will have a policy in place on malaria control within the school environment,
- By ... (date), the school policy on malaria prevention and control will be implemented and enforced.
- By ... (date), training will be provided for the educators responsible for implementing malaria control and prevention programmes.

5. INTEGRATING MALARIA PREVENTION INTO VARIOUS COMPONENTS OF HEALTH-PROMOTING SCHOOLS

Malaria prevention interventions can serve as an entry point for developing or enhancing policies, planning groups and various components that serve as a framework for a Health-Promoting School. These components include, but are not limited to (13):

<ul style="list-style-type: none">• School health policies• Skills-based health education• A health-supportive school environment• School health services• School/community projects and outreach	<ul style="list-style-type: none">• Health promotion for school staff• School safety• Physical exercise, recreation and sport• Counselling and social support.
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Effectiveness of interventions integrated into each of these components depends on the extent to which they are supported by people, policies and trained staff and also how successfully the components combine with other health promotion efforts to complement and reinforce one another.

Not all schools will have the resources to integrate malaria interventions into all of the components at one time. Therefore, each school has to establish its own priorities, in collaboration with all parties concerned, to decide the extent to which the components should be addressed. A Health-Promoting School enables students, parents, teachers and community members to work together to make such decisions. **It is more important to start with small changes that are possible than to wait until resources become available to address all of these components simultaneously.**

5.1 School Health Policies

School health policies are brief documents that set out a clear set of school standards for practices and conditions in the school building, surroundings and events. They can take the form of rules, regulations or requirements. They contribute to, and are reinforced by, a health supportive environment, skills-based health education and the provision of some health services. School health policies can significantly contribute to health when they are clearly communicated to all who need to be aware of them and when they are enforced. The consequences of not complying with school health policies must be clearly communicated to those persons who are expected to comply. School health policies that can help control and prevent malaria include:

Potentially useful school policies include:

- Any school health policy on prevention and treatment should be consistent with national policy.
- All schools should engage regularly in malaria prevention activities .(describe)
- All boarding school residents should own and use properly and insecticide treated net
- All cases of malaria should be reported to the District Health Medical Team

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- If treatment is to be provided in the school, there should be regulations to ensure the availability of effective drugs and a well trained health worker. Often the management of treatment by and in schools is viewed as an unaffordable and unattractive option. Generally, school interventions should focus on promoting prompt and effective treatment at the local health center.
 - Guidelines should be provided by schools to all teachers regarding the danger signs of malaria and under what conditions school personnel and/or students should be referred to health services for care and treatment..

The process of developing school policy, planning, implementation and assessing programmes should involve teachers, students, school health staff, school administrators, parents, local health authorities (malaria control programme) and appropriate community members.

5.2 Skills-Based Health Education

The primary goals of skills-based health education are to help individuals adopt behaviours and create conditions that are conducive to health. The clear and precise delineation of behaviours and conditions that are to be influenced is essential for the development of effective skills-based health education efforts.

Skills-based health promotion and disease prevention should be integrated into school health curricula as schools have the responsibility to equip children of all ages with the skills and information that they need in order to make informed choices to lead healthy and productive lives.

Skills-based health education should be provided as a planned sequential course of instruction from the primary through the secondary levels, addressing physical, mental, emotional and social dimensions of health. Health-related skills should be developed and refined during the course of one's education through interactive and participatory teaching methods (28). They can be taught as a specific subject, as part of other subjects, or ideally, as a combination of both (13, 32).

Skills based health education programmes should provide children with the knowledge and skills that they need to incorporate behaviours that will promote health by controlling and preventing malaria. The knowledge and skills needed to prevent malaria can be instilled in children not only by providing knowledge about the disease, but by incorporating actions, and providing support and encouragement to students in an effort to give them the confidence that they need to adopt these behaviours and attitudes in their own lives as well as the lives of their friends and families (34).

The following are examples of important behaviours that must be taught, acquired and refined among the school age population in order to prevent and control malaria. In order to accomplish this feat, school age children must learn, practice routinely and clearly understand the following behaviours and skills:

- Children need to be taught the importance of personal protection to prevent malaria infections. It is imperative that children understand that malaria kills and that it is absolutely vital to take every possible precaution in preventing the contraction of the disease. It is important that children understand that in Africa malaria mosquitoes bite at night, usually after 10 pm. Most importantly, children should be encouraged to always sleep under insecticide treated mosquito nets. In addition, other precautions

can also contribute to a reduction in the number of mosquito bites. When and where available, the use of mosquito repellent, especially those containing DEET, can reduce the number of mosquito bites. Children should apply repellents whenever possible. and wear protective clothing such as long sleeved tops, trousers and socks to help avoid being bitten by mosquitoes.

- Children must learn to avoid prolonged exposure to unhealthy environments.
 - They should avoid areas near potential mosquito breeding sites.
 - They should inform adults of these sites so that where possible the sites can be destroyed and treated.
 - Children should be encouraged to cover up at times of the day when mosquitoes are present in large numbers.
- After participating in skills based health education programmes, children of all ages should be able to recognize the symptoms of malaria and the importance of promptly seeking appropriate medical attention.
- After participating in skills based health education programmes, children will know the importance of finishing the course of medication to treat malaria as well as medication(s) dispensed for other illnesses.
- After participating in skills based health education programmes, children will be able to develop a health and wellness plan when recovering from malaria (if infected) to prevent malnutrition and dehydration, which may further complicate their health.

After participating in skills based health education programmes, it is hoped that children will be empowered and have the ability to direct and assist other children as well as adults with malaria control and prevention

Skills-based health education to control and prevent malaria should focus on enabling students to:

- sleep under insecticide treated mosquito nets every night
- maintain (retreat and mend torn mosquito nets) regularly use mosquito/insect repellents
- wear protective clothing such as long trousers, long sleeved tops and socks, when ever possible
- avoid mosquito bites and prolonged exposure to infested environments
- inform adults of breeding sites so that the sites can be destroyed and treated where possible
- create awareness in the family and community of the variety of effective prevention methods that exist including indoor spraying of walls with insecticide- usually carried out by government programmes
- create awareness in the family and community of the importance of protecting pregnant women and children under the age of 5
- seek appropriate medical attention for malaria like illness as quickly as possible
- treat malaria within 24 hours of symptoms developing
- finish a full course of medication to treat malaria
- implement a health and wellness plan when recovering from malaria to prevent malnutrition and dehydration, which may further complicate their health

To enable students to practice these behaviours, skills-based health education will need to help students acquire knowledge, attitudes and skills that are relevant to the behaviours. Educators should talk with students, parents and community leaders to identify knowledge, attitudes and skills that are most relevant to students in that particular community. Here are some examples of the kinds of knowledge, attitudes and skills that health educators might help students acquire to influence three important malaria prevention behaviours.

Example: To foster students' use of insecticide treated nets (ITN) or other insecticide treated materials

- ☐ **Students need to know:** what an ITN is, where to obtain one, how long to use it before replacing or re-treating it, what to do if one is not available: they also need to know that other insecticide treated materials exist, such as netting, which can be hung over doors and windows
- ☐ **Students need to acquire positive attitudes, such as:** Believing that using an ITN or other insecticide treated material is a good way to prevent mosquito bites that can spread malaria, believing that an ITN is a good way to protect persons who are most vulnerable, such as young children and pregnant women, believing that obtaining and using an ITN is worth the effort, believing that hanging insecticide treated materials as curtains on windows or doors is also a good investment of time and energy
- ☐ **Students need the skill to:** convince their parents to obtain ITNs for the family, show their parents how to hang and use an ITN effectively, safely treat a net with insecticide, use protective clothing, where possible, when an ITN is not available

Example: To foster prompt health seeking behaviour and get malaria treated within 24 hours

- ☐ **Students need to know:** how to recognize the symptoms of malaria, the length of time within which malaria must be treated, where to seek medical advice, what are the most effective medications, where to find them, to follow treatment instructions religiously, that some medications on the market could be fake or not effective at all and should be avoided at all cost.
- ☐ **Students need to acquire positive attitudes, such as:** believing that malaria can be treated and cured effectively if treatment begins quickly, believing that is worth investing in the correct life saving medications - not opting for alternatives because they are cheaper.
- ☐ **Students need the skill to:** read the instructions on malaria packaging and understand the dosage and frequency of treatment, convince their parents to treat young children very quickly, convince them not to buy drugs that are not recommended just because they are cheaper, to convince all patients to finish the full course of treatment

Example: To foster awareness of the need to avoid mosquito breeding areas and help keep the immediate environment free from mosquitoes

- ☐ **Students need to know:** where mosquitoes breed, how to prevent them from breeding, what time of day they are most active and seeking a blood meal, that where indoor spraying programmes do exist they are very effective in keeping mosquitoes out of the dwelling.
- ☐ **Students need to acquire positive attitudes, such as:** believing that malaria can be prevented and that where national, regional, district and community spraying programmes exist, they bring enormous benefits by reducing the incidence of malaria.
- ☐ **Students need the skill to:** encourage their families and community to listen to the advice of health specialists/ spraying campaigners to accept a spraying programme into their home

5.2.1 Selecting educational methods and materials for health education

Educational methods such as lectures, discussions, debates, role-plays and audio-visual aids should be designed or selected to increase knowledge, build positive attitudes and values, dispel myths, increase skills and provide support for the development of healthy lifestyles. They need to be appropriate for the developmental level of students. **The selection of an educational method should be based on the extent to which that method is appropriate to influence the factors such as knowledge, attitudes, skills, etc., associated with malaria awareness and preventive behaviours.** For example, a lecture is an effective way to increase knowledge but is less effective in influencing beliefs and building skills. Discussions, debates and carefully prepared written materials can be more effective than a lecture in dispelling local myths. Class activities such as treating nets with insecticides, preparing ITNs for sleeping, filling stagnant bodies of water on school grounds can be more effective than lectures, discussions, debates and written materials in building skills.

The following are examples of participatory teaching and learning methods that can be adapted to specific age groups and can be used to build skills and influence attitudes among school children (26, 28).

- Audio and visual activities
- Class Discussion
- Brainstorming
- Demonstration and guided practice
- Decision mapping or problem trees
- Community mapping and monitoring
- Role play
- Educational games
- Storytelling
- Practicing life skills specific to malaria prevention
- Competitions (drama, poster)
- Drama itself

The following list provides examples behaviours that can be taught in the classroom to provide school age children with the skills and knowledge that they need in order to develop healthy and proactive attitudes in the effort to prevent malaria infections. It is however realized that more specificity may be needed to provide guidance through examples regarding how to facilitate these activities in a classroom setting.

For example:

- Students should be educated about the various aspects of malaria, how it is spread, prevented and controlled. Facts and information can be drawn from Sections 1 and 2 of this document in effort to provide important background information on malaria. Information about the following essential topics is in Annex II on page 58.
 - How to recognize the mosquito that transmits the disease.
 - The importance of repelling and killing (if possible) the mosquito in their homes, schools and other environments that they and their families frequent.
 - They should be made to realize the seriousness of the disease by being presented with facts on the numbers of people that are killed yearly from malaria as well as those who suffer from health consequences of the disease. Local stories of people in the community who have died can make this more «real».
 - Children should learn that their community is striving to control malaria and that they can help to control it through physical and environmental changes.

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- Students can assist/accompany the teachers to help destroy or alter mosquito breeding sites, such as filling-up stagnant bodies of water in schools with sand or mud.
 - Contingent upon several factors this can be extended to areas beyond the school property into other community areas.
 - The students could participate in skits/puppet shows that teach about the spread/prevention/control of malaria. Family members and friends should be invited to view them in school. These productions should also be taken outside school and into the community followed by participatory community discussions.
 - Children can make posters, flipcharts, flashcards, as well as other materials that can be used to learn about the various aspects of malaria (35).
 - Children should be encouraged to take these learning materials home to educate other members of the family.
 - Students can be taught about correct use of other biological vector controls such as larvivorous fish.
 - Pyrethroid ITNs (insecticide treated nets) have proved to be highly effective in controlling the spread of malaria (37). If schools are distribution centres for ITNs to the community then students could assist in this activity.
 - Students may also be selected to work with the nurse/teacher that is involved in disseminating information to the community at large.

The following examples, which have been adapted from The Child-to-Child Trust (<http://www.child-to-child.org>), illustrates how to conduct class activities and exercises that may be used to teach skills based health education concerning malaria. In addition to referring to The Child-to-Child Trust to obtain guidance on conducting classroom activities, the 2004 edition of the FRESH initiative (<http://www.unesco.org/education/fresh>), offers additional examples demonstrating how to integrate malaria prevention and control into classroom lesson plans.

In selecting information to convey to students about malaria, scientific terms and details are considered less important than practical and basic information that will enable students to make informed decisions to protect themselves from malaria. Students are more likely to adopt behaviours to prevent malaria infections when they learn about these behaviours through enjoyable and participatory activities that emphasize the positive aspects of malaria control and prevention in a context of what is relevant and important to students.

Example 1:

Objective – Learning the symptoms of malaria

□ Suggested lesson

- Ask students what diseases are most common in their community.
- Ask students if they or someone they know have ever had malaria.
- Have students explain how they felt when they had malaria or what they think the symptoms of malaria are.
- Ask students if they think they can avoid getting malaria
- After the students have provided their input and shared their experiences, explain what malaria is, how malaria is spread and the symptoms of the disease
 - Make sure that the students understand the points previously introduced. Reinforce concepts by asking questions and providing relevant examples.
 - During this point of the class, introduce the medications used to treat malaria, the importance of seeking appropriate treatment and the importance as well as the dangers of not completing treatment regimens.
- If available, this activity could include the use of pictures of the mosquito vector as well as illustrations of people displaying symptoms of malaria.
- Another suggestion in facilitating this activity is to include role playing and short dramatizations.

Example 2:

Objective – To teach students where mosquitoes breed and how to prevent malaria.

□ Suggested lesson

- Ask children where mosquitoes hide and are commonly found.
- Ask how mosquitoes spread malaria.
- If available, show pictures of environmental conditions in which mosquitoes reproduce.
- Ask for ideas on how these breeding sites can be controlled and eliminated.
- Ask children how they believe that they can prevent malaria.
 - Ask students to share with the class what steps, if any, are taken in their homes to prevent malaria infections
- Show the students an Insecticide Treated Net (ITN). Explain to students what the ITN is, as well as why and how it is used.
 - Find out how many children use ITNs in their homes.
 - Teach children about maintaining and treating ITNs
- Methods of vector control to students such as netting and screens on doors and windows.
- Collect ideas from students on how malaria can be prevented through actions taken on the in school grounds. Schools put these ideas into actions by implementing them on school grounds.
- Students should complete the activities on mosquito breeding sites and malaria prevention with the following competencies that will enable them to:
 - Always sleep under an Insecticide Treated Net.
- Maintain and regularly treat the The Insecticide Treated Net should be well maintained and regularly treated the ITN.
- Kill mosquitoes in the home.
- Destroy places where mosquitoes reproduce.
- Cover all containers in the home where water is stored and/or where water can accumulate



Example 3:

□ Additional Suggestions

- Participatory activities to raise awareness about malaria control and prevention can be expanded to include take home assignments, which are meant to enlighten children about their home environment in terms of malaria control and prevention as well as engage children and parents in open discussion about malaria and how to prevent it in their home.
- Older groups of students can go into the classes of younger students to perform plays about malaria prevention.
 - Older students equipped with relevant skills and knowledge based health education can serve as role models for younger students as well as by offering guidance.
 - They can set an example through promoting good health and teaching younger children concern for the health of those around them (younger siblings not yet in school).
 - They can also demonstrate and encourage preventative as well as treatment seeking behaviours.
- Students of all ages can spread the message that of malaria can be controlled and prevented in their communities

5.2.2 Training teachers to implement health education

Research shows that teacher training for the implementation of a comprehensive secondary school health education curriculum positively affects teachers' preparedness for teaching skills-based health education and has positive effects both on curriculum implementation and on student outcomes (28).

Teachers who are expected to teach about health and malaria need to receive training and accurate information. Education and training should inspire and equip teachers with knowledge and skills to develop an exciting curriculum. Additionally, training should help teachers assess and improve their own attitudes and competencies regarding malaria and evaluate their personal behaviours taken to prevent malaria infection. Training should also be used as an opportunity to evaluate and improve malaria control and prevention programmes initiated in the classroom.

5.3 Healthy School Environment

The school's environment plays a significant role in determining whether interventions to promote positive health behaviours and malaria awareness will be effective and sustainable. A Health-Promoting School provides a safe and healthy environment that presents a realistic and attractive range of health choices to encourage a healthy lifestyle. It also helps students and others develop their physical, psychological and social potential (38). In a Health-Promoting School, the physical and psychosocial environment should be consistent with and reinforce other health promotion efforts (13).

5.3.1. Physical environment

Healthy school physical environments reduce diseases such as malaria and related absenteeism. As discussed in Section 2. 5, the physical environment of the school can either support or undermine malaria prevention and control. Schools should provide a healthy environment as role model in which children can learn study and interact with one another. Through the promotion of environmental health and sanitation, schools can set an example for their communities to encourage others to engage in similar practices.

The physical environment has a significant impact on children's health (39):	
●	The environment is one of the main determinants of children's health.
●	Children may be more susceptible to the adverse health effects of chemical, biological and physical hazards than adults.
●	The behavioural patterns of children are different from those of adults and therefore place them at risk from exposure to environmental threats that adults may not face.

The physical environment of the school includes the building, the contents inside the building as well as the surrounding area (37). A healthy physical environment in with regard to malaria is accomplished when biological agents and vectors such as mosquitoes and the diseases they carry are controlled and eliminated. When controlling biological vectors, it is important to remember the possible impact or potential hazards that chemical agents such as insecticides used during indoor-residual spraying and larviciding (where they are applicable) may have on children. Therefore, the use of insecticides in schools should be timed to have a minimal impact on students and school personnel. Care should also be taken when storing insecticides on school premises.

To control malaria and promote health and well-being in school, it is imperative to focus a heightened level of attention on vector control during periods of the year such as hot or rainy seasons when mosquitoes are known to be particularly active and reproduce. At all times of the year it is important to make sure, that the school's infrastructure such as gutters and drainage pipes exiting the building do not outflow so that water accumulates creating breeding sites. Puddles should be controlled on school grounds through filling or drainage. Protection should be provided indoors through the use of barriers that prevent mosquito entrance such as treated screens.

A school's environment **supports** malaria control and prevention when it:

- Plays role model in implementing effective preventive strategies (technically supported by local malaria control programmes)
- Attempts to ensure access to ITN and early treatment with effective antimalarial to the poor and vulnerable groups (such as the young children and pregnant women)

A school's environment **undermines** malaria control and prevention efforts when it:

- Attempts to provide a case management or treatment service (in the absence of trained health worker) which is often the cause for delayed treatment and eventual complication to fatal severe malaria.
- Fails to discourage local beliefs and practices that are inconsistent with modern, effective prevention and control methods.

5.4 School Health Services

School health services help foster health and well-being as well as prevent, reduce, monitor or treat important health problems or conditions. In Health-Promoting Schools, health services work in partnership with schools and services are provided for students, school personnel, families and community members. They are coordinated with other services and malaria prevention activities at school and in the community. They use specialists to provide advice and support for health promotion and malaria prevention.

Schools and communities need to consider what preventive and treatment services are necessary for prevention and treatment in the event of infection. Effective coordination avoids duplicating services. Give special attention to ensuring that services are easily accessible for students and school personnel.

Health service providers know the dangers of malaria. They also know that it is preventable. Invite them to the school: they can provide students, school personnel and parents with information on malaria as well as how to prevent it and seek treatment. They may also give good advice on teaching materials, support the development of a malaria control and prevention policy at school and provide assistance throughout the development of programmes.

Some schools provide health **services** related to the control and prevention of malaria. These services commonly include:

- Mass treatment of fever when there are malaria epidemics
- Mass treatment of parasitological diseases such as lymphatic filariasis, onchocerciasis
- Immunization combining distribution of ITNs
- Screening of health problems such as anaemia, malnutrition
- School feeding in underprivileged and needy areas

Many schools cannot provide health services but provide **referrals** to community health services. Malaria related referrals commonly include:

- Referral of severe malaria caused by *Plasmodium falciparum*
- Referral of comatose patient
- Referral of a patient with severe anaemia

5.5 Community and family involvement and outreach

Complementary community-wide strategies can strengthen education interventions (40). Health-Promoting Schools provide a valuable link to parents and community members who can support and encourage children to make choices that promote health. Schools, families and the community should work together to improve health and prevent malaria within the community (41).

5.5.1 Community participants

Malaria prevention activities provide excellent opportunities to undertake school/community projects that can affect the health status of the entire community. These projects give students a chance to become actively involved in learning how to prevent malaria. Community participants in the projects can acquire specific health-related knowledge as well as skills needed to undertake community actions (see Section 4.1 and Section 4.3).

The School Health Team and the Community Advisory Committee can jointly find ways for students, teachers and community members to work together to promote malaria awareness, stressing prevention through mass media and combined community/school interventions.

School/community projects to control and prevent malaria, commonly include:

- Community malaria awareness days
- Distribution of ITNs / Retreatment of ITNs
- Iron supplementation to anaemic children and pregnant young girls
- Mass treatment of fever during malaria epidemics
- Environmental measures to clear breeding sites (*particularly in areas with low malaria transmission - arid and semi-arid areas where mosquito population is low*). In areas with high transmission (*hyper endemic*), environmental management has little impact in reducing number of mosquitoes.
- Social mobilization for behavioural impact.

5.5.2 Family Involvement

Family provides a setting where students can understand, practice and share what they learn in the classroom about health and malaria prevention. Families have the ability to support and reinforce malaria prevention and health promotion. Thus, it is essential for school staff and parents to work together in order to maximize the potential for prevention both at school and at home. Students are most likely to adopt healthy lifestyle patterns if they receive consistent information and support through multiple channels; parents, peers, teachers, community members and the media. Parents, in turn, should feel that their children's school is open and receptive to their ideas and participation. Establish connections with parents during school health fairs, health-related workshops for parents, parent-teacher meetings or a parent's visit to relevant services at school or in the community.

The school can provide parents and family members with information, resources and skills related to malaria prevention in an effort to extend the school interventions into the students' homes. Involving parents in malaria prevention at the primary school level (for example through comic and interactive take-home activities and interventions at school) can encourage health promoting activities concerning malaria control in both students and their parents. In addition to learning how to prevent malaria infections among family members, parents can contribute services or resources to the school and participate or lead community efforts that promote malaria prevention.

Outreach to community and family members is especially important in places where a high percentage of young people do not attend school. School outreach to the community has the potential to reach those who have no direct contact with the school.

6. EVALUATION

Evaluation is a powerful tool that can be used to inform and strengthen school health programmes (42). Besides providing information about the extent to which the programme is being implemented as planned and producing the intended effect, evaluation can and should be used as a tool for planning health promotion programmes. Evaluation should include a needs assessment, baseline data collection, monitoring procedures and periodic and final assessments.

Evaluation is important because it helps schools:

- Involve policy-makers, sponsors, planners, administrators and participants in determining what the programme is to accomplish.
- Make improvements or adjustments in the process of implementation.
- Provide feedback to those involved in project planning to determine which parts of the project are working well and which are not.
- Document the experience gained from the project so that it can be shared with others.
- Demonstrate the value of the efforts and the achievements made by the school, parents, students and community members

Responsible officials, such as members of the school health team or their designees, should regularly review the implementation process and the effectiveness of school health interventions. The local health authorities, research and relevant academic institutions can help in evaluating progress and impact of school based malaria control. All groups affected by the programme should have the opportunity to provide input (43). Based upon the results of information gathered from evaluation, those involved in planning and implementing the interventions will make decisions concerning the programme and its various components.

6.1 Ongoing Evaluation

Evaluation is a critical element of a school-based programme that must be considered from the onset and remain ongoing. The groundwork for evaluation is laid **at the very beginning** of the implementation process, when needs are assessed, objectives set, activities planned and baseline indicators established. At the same time, an evaluation plan and monitoring mechanism should be established to track progress in accomplishing the goals and objectives. **During the course of the implementation**, evaluation is necessary to monitor the process in order to make adjustments or corrections where needed. **At the end**, or after a pre-determined time period, evaluation activities assess the results and impact of the interventions by measuring defined indicators and determine if the programmed change needs to be improved (32). The cycle will then start again with the question of what further change is desirable.

6.2 Types of Evaluation

Evaluation is a critical element of a school-based programme that must be considered from the onset and remain ongoing.

6.2.1 Process evaluation

This type of evaluation assesses how well the interventions are being implemented. Process evaluation should be ongoing to determine what interventions have actually been delivered, to who, and when. This will help to assess progress toward the programme's goal and objectives. Evaluation of the planning, development and implementation processes of the programme provides information on which mid-course adjustments can be made and documentation for others who want to learn from the implementation process. Methods for process evaluation involve tallies, record keeping by schools and interviews with teachers, school administrators and others.

Process evaluation answers questions such as:

- To what extent are the interventions being implemented the way they are intended? (e.g. number of ITNs distributed through schools, number of households sprayed through school efforts, malaria related school events for behavioural changes)
- To what extent are the interventions reaching the individuals who may need them (e.g. students, parents, teachers, community members)?

6.2.2 Outcome evaluation

Outcome evaluation measures whether and to what extent outcome objectives have been achieved. Outcome evaluation can demonstrate the benefits of school health promotion programmes or show further need for such programmes. By bringing evaluation results to the attention of the community, schools can convince others to become involved in the programme.

Quite often, the evaluation component is limited because resources (time, personnel and budget) are limited. In countries with limited resources, evaluations that measure the extent to which the planned interventions are being implemented as intended may be more feasible than evaluations to measure the impact of interventions on behaviour and related factors (knowledge, attitudes, skills).

Outcome evaluation answers questions such as:

- Are the interventions accomplishing what was expected, as expressed in the objectives?
- To what extent did students adopt health behaviours or create healthy conditions? (e.g. number (%) of students and staff sleeping under ITNs)
- To what extent did the programme achieve increases in students' knowledge, attitudes and skills related to malaria control and prevention?
- To what extent did the programme achieve in reduction of malaria burden among school communities? (e.g. malaria morbidity and mortality in students and teachers i.e. number of malaria cases and deaths as compared to baseline data or the beginning of the intervention)
- To what extent did the programme reduced school absenteeism due to malaria (both among students and teachers as compared to baseline data)?
- Which specific interventions worked the best? Which interventions did not work?
- Are programme planners and participants satisfied with the outcome(s)?
- How did students feel about the interventions?

6.3 What to evaluate

The chart below presents topics that might be addressed in conducting the two types of evaluation.

PROCESS EVALUATION	
Basic questions	Method of measurement
Does the school have a policy in place to control malaria within the school environment? Does the school have a policy in place to respond of malaria epidemics?	Interview with school officials or programme coordinator.
Is the school policy on malaria prevention and control implemented as written and enforced?	Interview with school officials or programme coordinator
Are teachers, students, school health personnel, school administrators, parents and appropriate community representatives involved in planning, implementing and assessing programmes and policy to raise malaria awareness?	Interview with programme coordinator and school health officers (school nurse, school doctor); interview with parents and community representatives
Is in-service training provided, as planned, for educators responsible for implementing malaria control and prevention programmes?	Interview with programme coordinator and educators
Is education to and control prevent malaria provided in the school curriculum? Is it provided in extra-curricular activities?	Interview with programme coordinator and teachers.
Are all lessons and education activities for preventing malaria and raising awareness about the disease implemented as planned?	Interview with educators; view records kept by educators; participate in classroom observation.
To what extent is malaria prevention integrated into the components of a Health-Promoting School?	Interview with school officials or programme coordinator.
What do students think of the interventions?	Interview with students; questionnaire; focus group discussion.
What do those responsible for implementing the interventions think of them?	Interview with educators.

OUTCOME EVALUATION	
Basic questions	Method of measurement
Does the malaria education programme foster the necessary knowledge, attitudes and skills to prevent and control the spread of malaria in the school population?	Questionnaire; interview; focus group discussion; interview with parents and teachers; observation
Does it prevent or reduce the number of malaria infections among students and teachers?	Records or tallies of infections Surveys on parasitological rates, health services data (taking the various epidemiological settings into account).
Does the training of educators foster the necessary knowledge, attitudes and skills to implement malaria prevention and control strategies?	Questionnaire; interview; focus group discussion; classroom observation.
Do teachers teach what they are trained to teach?	

6.4 Reporting progress and achievements

Any evaluation is complete only when its results are reported and communicated to those who need them and can use them. Evaluation is necessary to assess the progress and the achievements of the malaria control and prevention programme. This is of concern to policy-makers, education officials, administrators, and participants, especially if subsequent decisions involve allocating resources. Showing the positive effects of such interventions may also stimulate attention for malaria control and prevention.

Evaluation should be used as a means for improving malaria prevention: a negative answer to any of the evaluation questions should prompt the school to a further consideration of the effectiveness of particular efforts.

Annex 1: OTTAWA CHARTER FOR HEALTH PROMOTION (1986)

The first International Conference on Health Promotion, meeting in Ottawa this 21st day of November 1986, hereby presents this CHARTER for action to achieve Health for All by the year 2000 and beyond.

This conference was primarily a response to growing expectations for a new public health movement around the world. Discussions focused on the needs in industrialized countries, but took into account similar concerns in all other regions. It built on the progress made through the Declaration on Primary Health Care at Alma-Ata, the World Health Organization's Targets for Health for All document, and the recent debate at the World Health Assembly on intersectoral action for health

HEALTH PROMOTION

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being.

PREREQUISITES FOR HEALTH

The fundamental conditions and resources for health are:

- peace,
- shelter,
- education,
- food,
- income,
- a stable eco-system,
- sustainable resources,
- social justice, and
- equity.

Improvement in health requires a secure foundation in these basic prerequisites.

ADVOCATE

Good health is a major resource for social, economic and personal development and an important dimension of quality of life. Political, economic, social, cultural, environmental, behavioural and biological factors can all favour health or be harmful to it. Health promotion action aims at making these conditions favourable through **advocacy** for health.

ENABLE

Health promotion focuses on achieving equity in health. Health promotion action aims at reducing differences in current health status and ensuring equal opportunities and resources to enable all people to achieve their fullest health potential. This includes a secure foundation in a supportive environment, access to information, life skills and opportunities for making healthy choices. People cannot achieve their fullest health potential unless they are able to take control of those things which determine their health. This must apply equally to women and men.

MEDIATE

The prerequisites and prospects for health cannot be ensured by the health sector alone. More importantly, health promotion demands coordinated action by all concerned: by governments, by health and other social and economic sectors, by nongovernmental and voluntary organization, by local authorities, by industry and by the media. People in all walks of life are involved as individuals, families and communities. Professional and social groups and health personnel have a major responsibility to mediate between differing interests in society for the pursuit of health

Health promotion strategies and programmes should be adapted to the local needs and possibilities of individual countries and regions to take into account differing social, cultural and economic systems.

HEALTH PROMOTION ACTION MEANS:

BUILD HEALTHY PUBLIC POLICY

Health promotion goes beyond health care. It puts health on the agenda of policy makers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health.

Health promotion policy combines diverse but complementary approaches including legislation, fiscal measures, taxation and organisational change. It is coordinated action that leads to health, income and social policies that foster greater equity. Joint action contributes to ensuring safer and healthier goods and services, healthier public services, and cleaner, more enjoyable environments.

Health promotion policy requires the identification of obstacles to the adoption of healthy public policies in non-health sectors, and ways of removing them. The aim must be to make the healthier choice the easier choice for policy makers as well.

CREATE SUPPORTIVE ENVIRONMENTS

Our societies are complex and interrelated. Health cannot be separated from other goals. The inextricable links between people and their environment constitutes the basis for a socio-ecological approach to health. The overall guiding principle for the world, nations, regions and communities alike, is the need to encourage reciprocal maintenance - to take care of each other, our communities and our natural environment. The conservation of natural resources throughout the world should be emphasized as a global responsibility.

Changing patterns of life, work and leisure have a significant impact on health. Work and leisure should be a source of health for people. The way society organizes work should help create a healthy society. Health promotion generates living and working conditions that are safe, stimulating, satisfying and enjoyable.

Systematic assessment of the health impact of a rapidly changing environment-particularly in areas of technology, work, energy production and urbanization - is essential and must be followed by action to ensure positive benefit to the health of the public. The protection of the natural and built environments and the conservation of natural resources must be addressed in any health promotion strategy.

STRENGTHEN COMMUNITY ACTION

Health promotion works through concrete and effective community action in setting priorities, making decisions, planning strategies and implementing them to achieve better health. At the heart of this process is the empowerment of communities - their ownership and control of their own endeavours and destinies.

Community development draws on existing human and material resources in the community to enhance self-help and social support, and to develop flexible systems for strengthening public participation in and direction of health matters. This requires full and continuous access to information, learning opportunities for health, as well as funding support.

DEVELOP PERSONAL SKILLS

Health promotion supports personal and social development through providing information, education for health, and enhancing life skills. By so doing, it increases the options available to people to exercise more control over their own health and over their environments, and to make choices conducive to health.

Enabling people to learn, throughout life, to prepare themselves for all of its stages and to cope with chronic illness and injuries is essential. This has to be facilitated in school, home, work and community settings. Action is required through educational, professional, commercial and voluntary bodies, and within the institutions themselves

REORIENT HEALTH SERVICES

The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments. They must work together towards a health care system which contributes to the pursuit of health.

The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. Health services need to embrace an expanded mandate which is sensitive and respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components.

Reorienting health services also requires stronger attention to health research as well as changes in professional education and training. This must lead to a change of attitude and organization of health services which refocuses on the total needs of the individual as a whole person.

MOVING INTO THE FUTURE

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love. Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members.

Caring, holism and ecology are essential issues in developing strategies for health promotion. Therefore, those involved should take as a guiding principle that, in each phase of planning, implementation and evaluation of health promotion activities, women and men should become equal partners.

COMMITMENT TO HEALTH PROMOTION

The participants in this Conference pledge:

- to move into the arena of healthy public policy, and to advocate a clear political commitment to health and equity in all sectors;
- to counteract the pressures towards harmful products, resource depletion, unhealthy living conditions and environments, and bad nutrition; and to focus attention on public health issues such as pollution, occupational hazards, housing and settlements;
- to respond to the health gap within and between societies, and to tackle the inequities in health produced by the rules and practices of these societies;
- to acknowledge people as the main health resource; to support and enable them to keep themselves, their families and friends healthy through financial and other means, and to accept the community as the essential voice in matters of its health, living conditions and well-being;
- to reorient health services and their resources towards the promotion of health; and to share power with other sectors, other disciplines and, most importantly, with people themselves;
- to recognize health and its maintenance as a major social investment and challenge; and to address the overall ecological issue of our ways of living.

The Conference urges all concerned to join them in their commitment to a strong public health alliance.

CALL FOR INTERNATIONAL ACTION

The Conference calls on the World Health Organization and other international organizations to advocate the promotion of health in all appropriate forums and to support countries in setting up strategies and programmes for health promotion.

The Conference is firmly convinced that if people in all walks of life, nongovernmental and voluntary organizations, governments, the World Health Organization and all other bodies concerned join forces in introducing strategies for health promotion, in line with the moral and social values that form the basis of this CHARTER, Health For All by the year 2000 will become a reality.

CHARTER ADOPTED AT AN INTERNATIONAL CONFERENCE ON HEALTH PROMOTION

The move towards a new public health

November 17-21, 1986 Ottawa, Ontario, Canada



Annex 2: Symptoms of Malaria

The following information was prepared by the WHO South-East Asia Regional Office:

1. What is malaria?

Malaria is an infectious disease that is transmitted through mosquito bites. Malaria is caused by parasites in blood, namely plasmodium. There are two main kinds of malaria, *Plasmodium falciparum* and *Plasmodium vivax*. The former is a severe type that may kill patients whereas the latter is mild but chronic.

2 What are common signs and symptoms of malaria?

The initial symptoms are malaise (not feeling well), low grade fever, body pain or cold like symptoms followed by intermittent high fever.

- High fever
- Headache
- Nausea
- Vomiting
- Pale and yellowish skin.

3. When do the symptoms start after mosquito bite?

Generally, the symptoms start approximately 10 to 14 days after the biting of an infective mosquito. However, there are some types of malaria that the symptoms may start one to two or several months after mosquito biting.

If, in spite of all preventive measures, someone gets malaria it is important to know the symptoms so that timely medical advice and treatment can be sought.

4. How to recognize malaria ?

Symptoms of malaria

One of the first symptoms is fever accompanied with chill, rigor and followed by sweating. These symptoms recur at regular intervals (daily, 48 or 72 hours).

If the person has had these symptoms, then it could be malaria. See the doctor or the health worker as soon as possible.

The danger signs of severe malaria are:

- changes in behaviour (convulsions; unconsciousness; drowsiness; confusion; inability to walk, sit, speak, or recognize relatives);
- repeated vomiting, inability to retain oral medication, inability to eat or drink;
- passage of small quantities of urine or no urine, or passage of dark urine;
- severe diarrhoea;
- unexplained heavy bleeding from nose, gums or other sites;
- high fever (above 39° C);
- severe dehydration (loose skin and sunken eyes);
- anemia; and
- the whites of the eyes turning yellow.

5. What to do when someone has malaria?

When someone has ANY of the above symptoms, it is possible the patient has severe malaria. The patient's life could be in danger. Urgent treatment is needed at a clinic or hospital to save the patient's life. Do not waste any time in seeking good medical advice.

Annex 3: The Bangkok Charter for Health Promotion in a Globalized World

Introduction

Scope	The Bangkok Charter identifies actions, commitments and pledges required to address the determinants of health in a globalized world through health promotion.
Purpose	<p>The Bangkok Charter affirms that policies and partnerships to empower communities, and to improve health and health equality, should be at the centre of global and national development.</p> <p>The Bangkok Charter complements and builds upon the values, principles and action strategies of health promotion established by the Ottawa Charter for Health Promotion and the recommendations of the subsequent global health promotion conferences which have been confirmed by Member States through the World Health Assembly.</p>
Audience	<p>The Bangkok Charter reaches out to people, groups and organizations that are critical to the achievement of health, including:</p> <ul style="list-style-type: none">• governments and politicians at all levels• civil society• the private sector• international organizations, and• the public health community.
Health Promotion	The United Nations recognizes that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without discrimination. Health promotion is based on this critical human right and offers a positive and inclusive concept of health as a determinant of the quality of life and encompassing mental and spiritual well-being. Health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improve their health. It is a core function of public health and contributes to the work of tackling communicable and noncommunicable diseases and other threats to health.

Addressing the determinants of health

Changing context	The global context for health promotion has changed markedly since the development of the <i>Ottawa Charter</i> .
Critical factors	<p>Some of the critical factors that now influence health include:</p> <ul style="list-style-type: none">• increasing inequalities within and between countries• new patterns of consumption and communication• commercialization• global environmental change, and• urbanization.
Further Challenges	<p>Other factors that influence health include rapid and often adverse social, economic and demographic changes that affect working conditions, learning environments, family patterns, and the culture and social fabric of communities.</p> <p>Women and men are affected differently. The vulnerability of children and exclusion of marginalized, disabled and indigenous peoples have increased.</p>

New Opportunities	<p>Globalization opens up new opportunities for cooperation to improve health and reduce transnational health risks; these opportunities include:</p> <ul style="list-style-type: none"> • enhanced information and communications technology, and • improved mechanisms for global governance and the sharing of experiences.
Policy Coherence	<p>To manage the challenges of globalization, policy must be coherent across all:</p> <ul style="list-style-type: none"> • levels of governments • United Nations bodies, and • other organizations, including the private sector. <p>This coherence will strengthen compliance, transparency and accountability with international agreements and treaties that affect health.</p>
Progress made	<p>Progress has been made in placing health at the centre of development, for example through the Millennium Development Goals, but much more remains to be achieved; the active participation of civil society is crucial in this process.</p>

Strategies for health promotion in a globalized world

Effective interventions	<p>Progress towards a healthier world requires strong political action, broad participation and sustained advocacy.</p> <p>Health promotion has an established repertoire of proven effective strategies which need to be fully utilized.</p>
Required actions	<p>To make further advances in implementing these strategies, all sectors and settings must act to:</p> <ul style="list-style-type: none"> • advocate for health based on human rights and solidarity • invest in sustainable policies, actions and infrastructure to address the determinants of health • build capacity for policy development, leadership, health promotion practice, knowledge transfer and research, and health literacy • regulate and legislate to ensure a high level of protection from harm and enable equal opportunity for health and well-being for all people • partner and build alliances with public, private, nongovernmental and international organizations and civil society to create sustainable actions.

Commitments to Health for All

Rationale	<p>The health sector has a key leadership role in the building of policies and partnerships for health promotion.</p> <p>An integrated policy approach within government and international organizations, as well as a commitment to working with civil society and the private sector and across settings, are essential if progress is to be made in addressing the determinants of health.</p>
Key commitments	<p>The four key commitments are to make the promotion of health:</p> <ol style="list-style-type: none"> 1. central to the global development agenda 2. a core responsibility for all of government 3. a key focus of communities and civil society 4. a requirement for good corporate practice.

1. Make the promotion of health central to the global development agenda

Strong intergovernmental agreements that increase health and collective health security are needed. Government and international bodies must act to close the health gap between rich and poor. Effective mechanisms for global governance for health are required to address all the harmful effects of:

- trade
- products
- services, and
- marketing strategies.

Health promotion must become an integral part of domestic and foreign policy and international relations, including in situations of war and conflict.

This requires actions to promote dialogue and cooperation among nation states, civil society, and the private sector. These efforts can build on the example of existing treaties such as the World Health Organization Framework Convention for Tobacco Control.

2. Make the promotion of health a core responsibility for all of government

All governments at all levels must tackle poor health and inequalities as a matter of urgency because health is a major determinant of socioeconomic and political development. Local, regional and national governments must:

- give priority to investments in health, within and outside the health sector
- provide sustainable financing for health promotion.

3. Make the promotion of health a key focus of communities and civil society

To ensure this, all levels of government should make the health consequences of policies and legislation explicit, using tools such as equity-focused health impact assessment.

Communities and civil society often lead in initiating, shaping and undertaking health promotion. They need to have the rights, resources and opportunities to enable their contributions to be amplified and sustained. In less developed communities, support for capacity building is particularly important.

Well organized and empowered communities are highly effective in determining their own health, and are capable of making governments and the private sector accountable for the health consequences of their policies and practices.

Civil society needs to exercise its power in the marketplace by giving preference to the goods, services and shares of companies that exemplify corporate social responsibility.

Grass-roots community projects, civil society groups and women's organizations have demonstrated their effectiveness in health promotion, and provide models of practice for others to follow.

Health professional associations have a special contribution to make.

4. Make the promotion of health a requirement for good corporate practice

The corporate sector has a direct impact on the health of people and on the determinants of health through its influence on:

- local settings
- national cultures
- environments, and
- wealth distribution.

The private sector, like other employers and the informal sector, has a responsibility to ensure health and safety in the workplace, and to promote the health and well-being of their employees, their families and communities.

The private sector can also contribute to lessening wider global health impacts, such as those associated with global environmental change by complying with local, national and interna-

tional regulations and agreements that promote and protect health. Ethical and responsible business practices and fair trade exemplify the type of business practice that should be supported by consumers and civil society, and by government incentives and regulations.

A global pledge to make it happen

- All for health** Meeting these commitments requires better application of proven strategies, as well as the use of new entry points and innovative responses.
- Partnerships, alliances, networks and collaborations provide exciting and rewarding ways of bringing people and organizations together around common goals and joint actions to improve the health of populations.
- Each sector – intergovernmental, government, civil society and private – has a unique role and responsibility.
- Closing the implementation gap** Since the adoption of the Ottawa Charter, a significant number of resolutions at national and global level have been signed in support of health promotion, but these have not always been followed by action. The participants of this Bangkok Conference forcefully call on Member States of the World Health Organization to close this implementation gap and move to policies and partnerships for action.
- Call for action** Conference participants request the World Health Organization and its Member States, in collaboration with others, to allocate resources for health promotion, initiate plans of action and monitor performance through appropriate indicators and targets, and to report on progress at regular intervals. United Nations organizations are asked to explore the benefits of developing a Global Treaty for Health.
- Worldwide partnership** This Bangkok Charter urges all stakeholders to join in a worldwide partnership to promote health, with both global and local engagement and action.
- Commitment to improve health** We, the participants of the 6th Global Conference on Health Promotion in Bangkok, Thailand, pledge to advance these actions and commitments to improve health.

11 August 2005

Note: This charter contains the collective views of an international group of experts, participants of the 6th Global Conference on Health Promotion, Bangkok, Thailand, August 2005, and does not necessarily represent the decisions or the stated policy of the World Health Organization.

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